

SPECIFICATION AMENDMENTS

Page 1, rewrite the paragraph beginning with line 1 to read --

DEVICE FOR DETECTING ELECTRICAL POTENTIALS IN THE  
FOREHEAD REGION OF A PATIENT

SPECIFICATION

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a national stage of PCT/EP00/03997  
filed 4 May 2000 and based upon German National applications 19920  
433.0 of 4 May 1999, 199 36 505.9 of 5 August 1999, 299 27 806.4  
filed 8 October 1999, and 199 56 841.3 filed 26 March 1999 under  
the International Convention.

FIELD OF THE INVENTION

The invention relates to a device for detecting  
electrical potentials in the forehead region of a patient.

BACKGROUND OF THE INVENTION -.

It is possible, on the basis of electrical potentials to  
draw conclusions about the brain activity of a human being. In  
particular, it is possible, in the case of a person who is asleep,  
to determine the individual sleep states, on the basis of the brain  
activity which is ascertained during sleep

Page 1, replace the paragraph beginning with line 15 to read --

OBJECT OF THE INVENTION

The object of the invention is to improve the reliability of detection of electrical potentials in the forehead region of a patient and to permit application of the required electrodes in a manner which is agreeable to the patient.

Replace the paragraph beginning with line 19 to read --

SUMMARY OF THE INVENTION

In accordance with the invention that object is attained by a device for detecting electrical potentials on a patient, with an electrode device which can be applied in the forehead region of the patient, wherein the electrode device is arranged on a forehead support element which co-operates with a breathing mask device in such a way that the application position of the electrode device is established in conjunction with the application position of the breathing mask device.

Page 5, rewrite the paragraph beginning with line 25 to read --

BRIEF DESCRIPTION OF THE DRAWING --.

Page 6, rewrite the paragraph beginning with line 1 to read --

Figure 1 is a perspective view which shows a perspective view of a breathing mask with a forehead support element which has three electrodes for detecting electrical potentials in the forehead region of the patient, --.

Page 6, rewrite the paragraph beginning with line 4 to read --

Figure 2 is a cross sectional view which shows a illustrates an elastically yielding mounting of an electrode element, --.

Page 6, rewrite the paragraph beginning with line 6 to read --

Figure 3a is a perspective view of an elastomer band element which has three electrodes for detecting the electrical brain activity of a patient, wherein the band element can be coupled to a forehead support element, --.

Page 6, rewrite the paragraph beginning with line 10 to read --

Figure 3b is a simplified sectional view through a forehead support element into which the band element shown in Figure 3a is fitted, --.

Page 6, rewrite the paragraph beginning with line 12 to read --

Figure 3c is a simplified sectional view through an electrode element as is used in particular in the forehead support element shown in Figure 3a, --.

Page 6, rewrite the paragraph beginning with line 15 to read --

Figure 4 is a perspective view of a further embodiment of a forehead support element with integrated electrode elements for detecting the electrical brain activity of a patient, wherein the forehead support element can be coupled to a duct portion of a breathing mask, --.

Page 6, rewrite the paragraph beginning with line 19 to read --

Figure 5 is a simplified diagram to illustrate a forehead band element with integrated signal processing device, --.

Page 6, rewrite the paragraph beginning with line 21 to read --

Figure 6a is a perspective view of a signal processing device provided for use in a forehead support element, either in case a for telemetric data transmission (for example by radio) or case b for the storage of a preferably compressed data set on an interchangeable data carrier, preferably in chip card form, --.

Page 6, rewrite the paragraph beginning with line 21 to read --

Figure 6b is a simplified sectional view through a receiving portion in a forehead support element for receiving the signal processing device shown in Figure 6a, and --.

Page 6, rewrite the paragraph beginning with line 21 to read --

Figure 7 is a simplified perspective view of a measuring arrangement according to the invention for detecting the electrical brain activity of a patient here with a total of five electrode elements pre-positioned by way of a breathing mask and a telemetric data transmission device. --.

Page 7, replace the paragraph beginning with line 3 to read --

SPECIFIC DESCRIPTION

The breathing mask shown in Figure 1 includes a mask member 1 which delimits an internal space 2 of the mask. Provided on an edge portion which is towards the ambient region of the nose of a patient is a sealing device 3 which here has at least one elastic sealing lip which comes into intimate contact with the surface of the face of the patient and in so doing seals off the internal space 2 of the mask with respect to the ambient atmosphere. Here, the sealing device 3 has a portion 4 which is drawn in comparatively deeply in the region of the bridge of the nose, thereby affording placement of the mask member 1 with respect to the nose of the patient, in such a way that it remains the same with a high degree of accuracy of repetition.

Page 7, replace the paragraph beginning with line 14 to read --

In the embodiment illustrated here the mask member 1 has a breathing gas duct 5 which extends through a forehead support element 6. The gas duct 5 is a stiffening element which stiffeningly couples the forehead support element 6 to the mask 1. In the embodiment illustrated here, the mask member 1 and the

forehead support element 6 are formed integrally from an elastomer material, in particular a fully transparent silicone rubber material.

Page 8, replace the paragraph beginning with line 28 to read --

Figure 3a shows a particular embodiment of the electrode arrangement according to the invention, which here has a band 15 which is formed from an elastomer material and into which the electrode elements 9, 10 and 11 are fitted. The band 15 is of an outside contour --.